

GCCCCAGGGCTGGAGAGGCTGAAAGAAACCTGGAGCCAGGAGCCCCGGCTCACTCTGGTTTCTGAAGGCCATTC 79
 CCTGCCTCGGGCTCTCCACCCACCTCTTGAGGCTTCAAGGTTGATCTCAGGACTCCAGGACCCAGG 158
 AGAGGGAAAGAATCTGAGGAACACAGAACAGTGACCTTCCCACACCCCATCTCCCATCACCATCTCCCTCACCT 237
 CACCCCTCCCTGGCTGGCCCTGGACCCCATCCCGACCTCCCTATCAGCTGACTCTTCAGTGTCTGGCCCTC 316
 TGGGCTCTCCCTCCCTGGCTTCTACCACTCCCTCTATCGGGCTCTATCTGAGGTGCCCTGGGATTATAAA 395
 ACTGGGTTCCGAATGCTGAATAAGAGACGGTAAGAGCCAGGGCAAGGACAGCACTGTTCTCTGCCTGCCTGATAACCT 474

M	A	G	G	A	W	G	7
CACCACTGGAACATCCCGAGACCCCTTAACTCCGGACAGAG ATG GCT GCC GGA GCC TGG GGC						543	

R L A C Y L E F L K K E E L K E F Q L L 27
 CGC CTG GCC TGT TAC TTG GAG TTC CTG AAG AAG GAG CTC AAG GAG TTC CAG CTT CTG 603
 L A N K A H S R S S S G E T P A Q P E K 47
 CTC GCC AAT AAA GCG CAC TCG AGG AGC TCT TCG GGT GAG ACA CCC GCT CAG CCA GAG AAG 663
 T S G M E V A S Y L V A Q Y G E Q R A W 67
 ACG AGT GGC ATG GAG GTG GCC TCG TAC CTG GTG GCT CAG TAT CGG GAG CAG CGG GCC TGG 723

D	L	A	L	H	T	W	E	Q	M	G	L	R	S	L	C,	A	Q	A	Q	87
GAC CTA GCC CTC CAT ACC TCG GAG CAG ATG GGG CTG AGG TCA CTG TGC GCC CAA GCC CAG 783																				

E G A G H S P S F P Y S P S E P H L G S 107
 GAA GGG GCA GGC CAC TCT CCC TCA TTC CCC TAC AGC CCA AGT GAA CCC CAC CTG GGG TCT 843
 P S Q P T S T A V L M P W I H E L P A G 127
 CCC AGC CAA CCC ACC TCC ACC GCA GTG CTA ATG CCC TGG ATC CAT GAA TTG CCG GCG GGG 903
 C T Q G S E R R V L R Q L P D T S G R R 147
 TGC ACC CAG GGC TCA GAG AGA AGG GTT TTG AGA CAG CTC CCT GAC ACA TCT GGA CGC CCC 963
 W R E I S A S L L Y Q A L P S S P D H E 167
 TCG AGA GAA ATC TCT GCC TCA CTC CCT TAC CAA GCT CTT CCA AGC TCC CCA GAC CAT GAG 1023

S	P	S	Q	E	S	P	N	A	P	T	S	T	A	V	L	G	S	W	G	187
TCT CCA AGC CAG GAG TCA CCC AAC GGC CCC ACA TCC ACA GCA GTG CTG GGG AGC TGG GGA 1083																				

S P P Q P S L A P R E Q E A P G T Q W P 207
 TCC CCA CCT CAG CCC AGC CTA GCA CCC AGA GAG CAG GAG GCT CCT GGG ACC CAA TGG CCT 1143
 L D E T S G I Y Y T E I R E R E R E K S 227
 CTG GAT GAA ACC TCA GGA ATT TAC TAC ACA GAA ATC AGA GAA AGA GAG AGA GAG AAA TCA 1203

E	K	G	R	P	P	W	A	A	V	V	G	T	P	P	Q	A	H	T	S	247
GAG AAA GGC AGG CCC CCA TGG GCA GCG GTG GTA GGA AGC CCC CCA CAG GCG CAC ACC AGC 1263																				

L Q P H H H P W E P S V R E S L C S T W 267
 CTA CAG CCC CAC CAC CCA TGG GAG CCT TCT GTG AGA GAG AGC CTC TGT TCC ACA TGG 1323
 P W K N E D F N Q K F T Q L L L L Q R P 287
 CCC TGG AAA AAT GAG GAT TTT AAC CAA AAA TTC ACA CAG CTC CTA CTT CTA CAA AGA CCT 1383
 H P R S Q D P L V K R S W P D Y V E E N 307
 CAC CCC AGA AGC CAA GAT CCC CTG GTC AAG AGA AGC TGG CCT GAT TAT GTG GAG GAG AAT 1443

R	G	H	L	I	E	I	R	D	L	F	G	P	G	L	D	T	Q	E	P	327
CGA GGA CAT TTA ATT GAG ATC AGA GAC TTA TTT GGC CCA GGC CTG GAT ACC CAA GAA CCT 1503																				

R I V I L Q G A A G I G K S T L A R Q V 347
 CGC ATA GTC ATA CTG CAG GGG GCT GGT GGA ATT GGG AAG TCA ACA CTG GCC AGG CAG GTG 1563

FIG. 1A

K E A W G R G Q L Y G D R F Q H V F Y F 367
 AAG GAA GCC TGG CGG AGA GGC CAG CTG TAT GGG GAC CCG TTC CAG CAT GTC TTC TAC TTC 1623

S C R E L A Q S K V V S L A E L I G K D 387
 ACC TGC AGA GAG CTG GCC CAG TCC AAG GTG GTG AGT CTC CCT GAG CTC ATC GGA AAA GAT 1683

G T A T P A P I R Q I L S R P E R L L F 407
 GGG ACA GCC ACT CCC GCT CCC ATT AGA CAG ATC CTG TCT AGG CCA GAG CGG CTG CTC TTC 1743

I L D G V D E P G W V L Q E P S S E L C 427
 ATC CTC GAT GGT GAA GAT CAG CCA CGA TGG GTC TTG CAG GAG CCG AGT TCT GAG CTC TGT 1803

L H W S Q P Q P A D A L L G S L L G K T 447
 CTG CAC TGG AGC CAG CCA CGG GCG GAT GCA CTG CTC CGC AGT TTG CTG GGG AAA ACT 1863

I L P E A S F L I T A R T T A L Q N L I 467
 ATA CTT CCC GAG GCA TCC TTC CTG ATC ACG GCT CGG ACC ACA GCA GCT CTG CAG AAC CTC ATT 1923

P S L E Q A R W V E V L G F S E S S R K 487
 CCT TCT TTG GAG CAG GCA CGT TGG GTC CTG GGG TTC TCT GAG TCC AGC AGG AAG 1983

E Y F Y R Y F T D E R Q A I R A F R L V 507
 GAA TAT TTC TAC AGA TAT TTC ACA GAT GAA AGG CAA GCA ATT AGA GCC TTT AGG TTG GTC 2043

K S N K E L W A L C L V P W V S W L A C 527
 AAA TCA AAC AAA GAG CTC TGG GCC CTG TGT CTT GTG CCC TGG GTG TCC TGG CTG GCC TGC 2103

T C L M Q Q M K R K E K L T L T S K T T 547
 ACT TGC CTG ATG CAG CAG ATG AAG CGG AAG GAA AAA CTC ACA CTG ACT TCC AAG ACC ACC 2163

T T L C L H Y L A Q A L Q A Q P L G P Q 567
 ACA ACC CTC TGT CTA CAT TAC CTT GCC CAG GCT CTC CAA GCT CAG CCA TTG GGA CCC CAG 2223

L R D L C S L A A E G I W Q K K T L F S 587
 CTC AGA GAC CTC TGG TCT CTG GCT GAG GGC ATC TGG CAA AAA AAG ACC CTT TTC AGT 2283

P D D L R K H G L D G A I I S T F L K M 607
 CCA GAT GAC CTC AGG AAG CAT CGG TTA GAT GGG GCC ATC ATC TCC ACC TTC TTG AAG ATG 2343

G I L Q E H P I P L S Y S F I H L C F Q 627
 GGT ATT CTT CAA GAG CAC CCC ATC CCT CTG AGC TAC AGC TTC ATT CAC CTC TGT TTC CAA 2403

E F F A A M S Y V L E D E K G R G K H S 647
 GAG TTC TTT GCA GCA ATG TCC TAT GTC TTG GAG GAT GAG AAG GGG AGA GGT AAA CAT TCT 2463

N C I I D L E K T L E A Y G I H G L F G 667
 AAT TGC ATC ATA GAT TTG GAA AAG AGC CTA GAA GCA TAT GGA ATA CAT GGC CTG TTT GGG 2523

A S T T R F L L G L L S D E G E R E M E 687
 GCA TCA ACC ACA CTC TTC CTA TTG GCC CTG TTA AGT GAT GAG GGG GAG AGA GAG ATG GAG 2583

N I F H C R L S Q G R N L M Q W V P S L 707
 AAC ATC TTT CAC TGC CGG CTG TCT CAG GGG AGG AAC CTG ATG CAG TGG GTC CCG TCC CTG 2643

Q L L L Q P H S L E S L H C L Y E T R N 727
 CAG CTG CTG CAG CCA CAC TCT CTG GAG TCC CTC CAC TCC TTG TAC GAG ACT CGG AAC 2703

K T F L T Q V M A H F E E M G M C V E T 747
 AAA ACG TTC CTG ACA CAA GTG ATG GCC CAT TTC GAA GAA ATG GGC ATG TGT GTA GAA ACA 2763

D M E L L V C T F C I K F S R H V K K L 767
 GAC ATG GAG CTC TTA GTG TGC ACT TTC TGC ATT AAA TTC AGC CGC CAC GTG AAG AAG CTT 2823

Q L I E G R Q H R S T W S P T M V V L F 787
 CAG CTG ATT GAG GGC AGG CAG CAC AGA TCA ACA TGG AGC CCC ACC ATG GTC GTC CTG TTC 2883

R W V P V T D A Y W Q I L F S V L K V T 807

FIG. 1B

AGG TCG GTC CCA GTC ACA GAT GCC TAT TGG CAG ATT CTC TTC TCC GTC CTC AAG GTC ACC 2943
 R N L K E D S L S G N S L S H S A V K S 327
 AGA AAC CTG AAG GAG CTG GAC CTA AGT GGA AAC TCG CTG AGC GAC TCT GCA GTG AAG AGT 3003
 L C K T L R R P R C L L E T L R L A G C 347
 CTT TGT AAG ACC CTG AGA CGC CCT CGC TCG CTC CTG GAG ACC CTG CGG TTG GCT GGC TGT 3063
 G L T A E D C K D L A F G L R A N Q T L 367
 GGC CTC ACA GCT GAG GAC TCG AAG GAC CTT CCC TTT CGG CTG AGA GCC AAC CAG ACC CTG 3123
 T E L D L S F N V L T D A G A K H L C Q 387
 ACC GAG CTG GAC CTG AGC TTC AAT GTG CTC ACG GAT GCT GGA GCC AAA CAC CTT TGC CAG 3183
 R L R Q P S C K L Q R L Q L V S C G L T 907
 AGA CTG AGA CGA CGG AGC TCG AAG CTA CAG CGA CTG CAG CTG GTC AGC TGT GGC CTC ACG 3243
 S D C C Q D L A S V L S A S P S L K E L 927
 TCT GAC TGC TGC CAG GAC CTG CCC TCT GTG CTT AGT GGC AGC CCC AGC CTG AAG GAG CTA 3303
 D L Q Q N N L D D V G V R L L C E G L R 947
 GAC CTG CAG CAG AAC AAC CTG GAT GAC GTT GGC GTG CGA CTG CTC TGT GAG GGG CTC AGG 3363
 H P A C K L I R L G L D Q T T L S D E M 967
 CAT CCT GCC TGC AAA CTC ATA CGC CTG GGG CTG GAC CAG ACA ACT CTG AGT GAT GAG ATG 3423
 R Q E L R A L E Q E K P Q L L I F S R R 987
 AGG CAG GAA CTG AGG GGC CTG GAG CAG GAG AAA CCT CAG CTG CTC ATC TTC AGC AGA CGG 3483
 K P S V M T P T E G L D T G E M S N S T 1007
 AAA CCA AGT GTG ATG ACC CCT ACT GAG GGC CTG GAT AGC GGA GAG ATG AGT AAT AGC ACA 3543
 S S L K R Q R L G S E R A A S H V A Q A 1027
 TCC TCA CTC AAG CGG CAG AGA CTC GGA TCA GAG AGG GCG GCT TCC CAT GTT GCT CGG GCT 3603
 N L K L L D V S K I F P I A E I A E E S 1047
 AAT CTC AAA CTC CTG GAC GTG AGC AAG ATC TTC CCA ATT CCT GAG ATT GCA GAG GAA AGC 3663
 S P E V V P V E L L C V P S P A S Q G D 1067
 TCC CCA GAG GTA GTA CCC GTG GAA CTC TTG TGC CCT TCT GGC TCT GCA CGG GAC 3723
 L H T K P L G T D D D F W G P T G P V A 1087
 CTG CAT ACG AAG CCT TTG GGG ACT GAC GAT GAC TTC TGG GGC CCC ACG CGG CCT GTG GCT 3783
 T E V V D K E K N L Y R V H F P V A G S 1107
 ACT GAG GTA GTT GAC AAA GAA AAG AAC TTG TAC CGA GTT CAC TTC CCT GCA GCT GGC TCC 3843
 Y R W P N T G L C F V M R E A V T V E I 1127
 TAC CGC TGG CCC AAC AGC CGT CTC TGC TTT GTG ATG AGA GAA GCG GTG ACC GTT GAG ATT 3903
 E F C V W D Q F L G E I N P Q H S W M V 1147
 GAA TTC TGT GTG TGG GAC CAG TTC GGT GAG ATC AAC CCA CAG CAC AGC TGG ATG GTG 3963
 A G P L L D I K A E P G A V E A V H L P 1167
 GCA GGG CCT CTC CTG GAC ATC AAG GCT GAG CCT GGA GCT GTG GAA GCT GTG CAC CTC CCT 4023
 H F V A L Q G G H V D T S L F Q M A H F 1187
 CAC TTT GTG GCT CTC CAA CGG GGC CAT GTG GAC ACA TCC CTG TTC CAA ATG GCC CAC TTT 4083
 K E E G M L L E K P A R V E L H H I V L 1207
 AAA GAG GAG CGG ATG CTC CTG GAG AAG CCA GCC AGG GTG GAG CTG CAT CAC ATA GTT CTG 4143
 E N P S F S P L G V L L K M I H N A L R 1227
 GAA AAC CCC AGC TTC TCC CCC TTG GGA GTC CTC CTG AAA ATG ATC CAT AAT GCC CTG CGC 4203
 F I P V T S V V L L Y H R V H P E E V T 1247
 TTC ATT CCC GTC ACC TCT GTG GTG TTG CTT TAC CAC CGC GTC CAT CCT GAG GAA GTC ACC 4263

FIG. 1C

F	H	L	Y	L	I	P	S	D	C	S	I	R	K	E	L	E	L	C	Y	1267	
TTC	CAC	CTC	TAC	CTG	ATC	CCA	AGT	GAC	TGC	TCC	ATT	CGG	AAG	GAA	CTG	GAG	CTC	TGC	TAT	4323	
R	S	P	G	E	D	Q	L	F	S	E	F	Y	V	G	H	L	G	S	G	1287	
CGA	AGC	CCT	GGA	GAA	GAC	CAG	CTG	TTC	TGC	GAG	TTC	TAC	GTT	GGC	CAC	TTG	GGA	TCA	GGG	4383	
I	R	L	Q	V	K	D	K	K	D	E	T	L	V	W	E	A	L	V	K	1307	
ATC	AGG	CTG	CAA	GTC	AAA	GAC	AAG	AAA	GAT	GAG	ACT	CTG	GTC	TGG	GAG	GCC	TTG	GTC	AAA	4443	
P	G	D	L	M	P	A	T	T	L	I	P	P	A	R	I	A	V	P	S	1327	
CCA	GGA	GAT	CTC	ATG	CCT	GCA	ACT	ACT	CTG	ATC	CCT	CCA	GCC	CGC	ATA	GCC	GTA	CCT	TCA	4503	
P	L	D	A	P	Q	L	L	H	F	V	D	Q	Y	R	E	Q	L	I	A	1347	
CCT	CTG	GAT	GCC	CCC	CAG	TTG	CTG	CAC	TTT	GTC	GAC	CAG	TAT	CGA	GAG	CAG	CTG	ATA	GCC	4563	
R	V	T	S	V	E	V	V	L	D	K	L	H	G	Q	V	L	S	Q	E	1367	
CGA	GTC	ACA	TCG	GTC	GAG	GTT	CTC	TTG	GAC	AAA	CTG	CAT	GGA	CAG	GTC	CTG	AGC	CAG	GAG	4623	
R	Y	E	R	V	L	A	E	N	T	R	P	S	Q	M	R	K	L	F	S	1387	
CAG	TAC	GAG	AGG	GTC	CTG	GCT	GAG	AAC	ACG	AGG	CCC	AGC	CAG	ATG	CGG	AAG	CTG	TTC	AGC	4683	
L	S	Q	S	W	D	R	K	C	K	D	G	L	Y	Q	A	L	K	E	T	1407	
TTG	AGC	CAG	TCC	TGG	GAC	CGG	AAG	TGC	AAA	GAT	GGA	CTC	TAC	CAA	GCC	CTG	AAG	GAG	ACC	4743	
H	P	H	L	I	M	E	L	W	E	K	G	S	K	K	G	'	L	L	P	L	1427
CAT	CCT	CAC	CTC	ATT	ATG	GAA	CTC	TGG	GAG	AAG	GGC	AGC	AAA	AAG	GGA	CTC	CTG	CCA	CTC	4803	
S	S	*																		1430	
AGC	AGC	TGA																		4812	
AGTATCACACCCAGCCCTTGACCCCTTGAGTCCTGGCTTGCGTACCCCTTTGGGTCTCAGTTCTCTCTGCRAA																				4891	
CAAGTTGCCATCTGGTTGCCTTCCAGCACTAAAGTAAATGGAACCTTGTATGATGATGCCTTGTGGCAATTATGTGTCAT																				4970	
GCCAGGGATGCCACAGGGGGCCCCAGTCAGGTGGCTAACAGCATCTCAGGGAAATGTCCATCTGGAGCTGGCAAGACC																				5049	
CCTGCAGACCTCATAGAGCCTCATGGTGGCCACAGCAGCCAAGCCTAGAGGCCCTCCGGATCCCCTCCAGGGCAAG																				5128	
AGGAATAGGAGGCACTGAAACCATTTGGCTCTGGCTGTACAGGTGAGCCCCAAAATTGGGTTAGCGTGGAGGAGTT																				5207	
GCCACGTGGATTCTTGGCTTGTACAGGAAGATCTACAGAGCAAGCCACAGAGTAAAGTGGAGGAAGTTATTAG																				5286	
AAAATAAGGAGTATCACAGCTTTAGAATTGTAGCAGGCTTCCAGTTTACACAGAAAACCCCTATAATTAA																				5365	
AAAATTTTACTTAAATTAGAATTAAAAAAATACAAAAAGAAAAATGAAAATAAGGAATAAGAAGTTACCTAC																				5444	
AAAATTTTACTTAAATTAGAATTAAAAAAATACAAAAAGAAAAATGAAAATAAGGAATAAGAAGTTACCTAC																				5444	

FIG. 1D

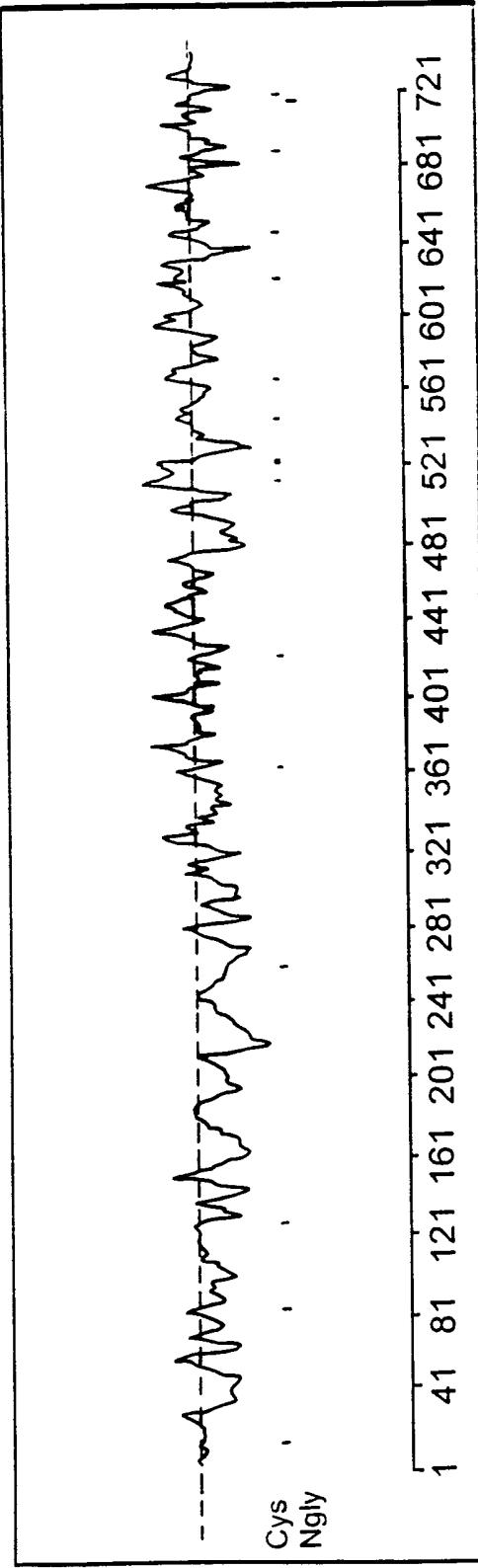


FIG. 2

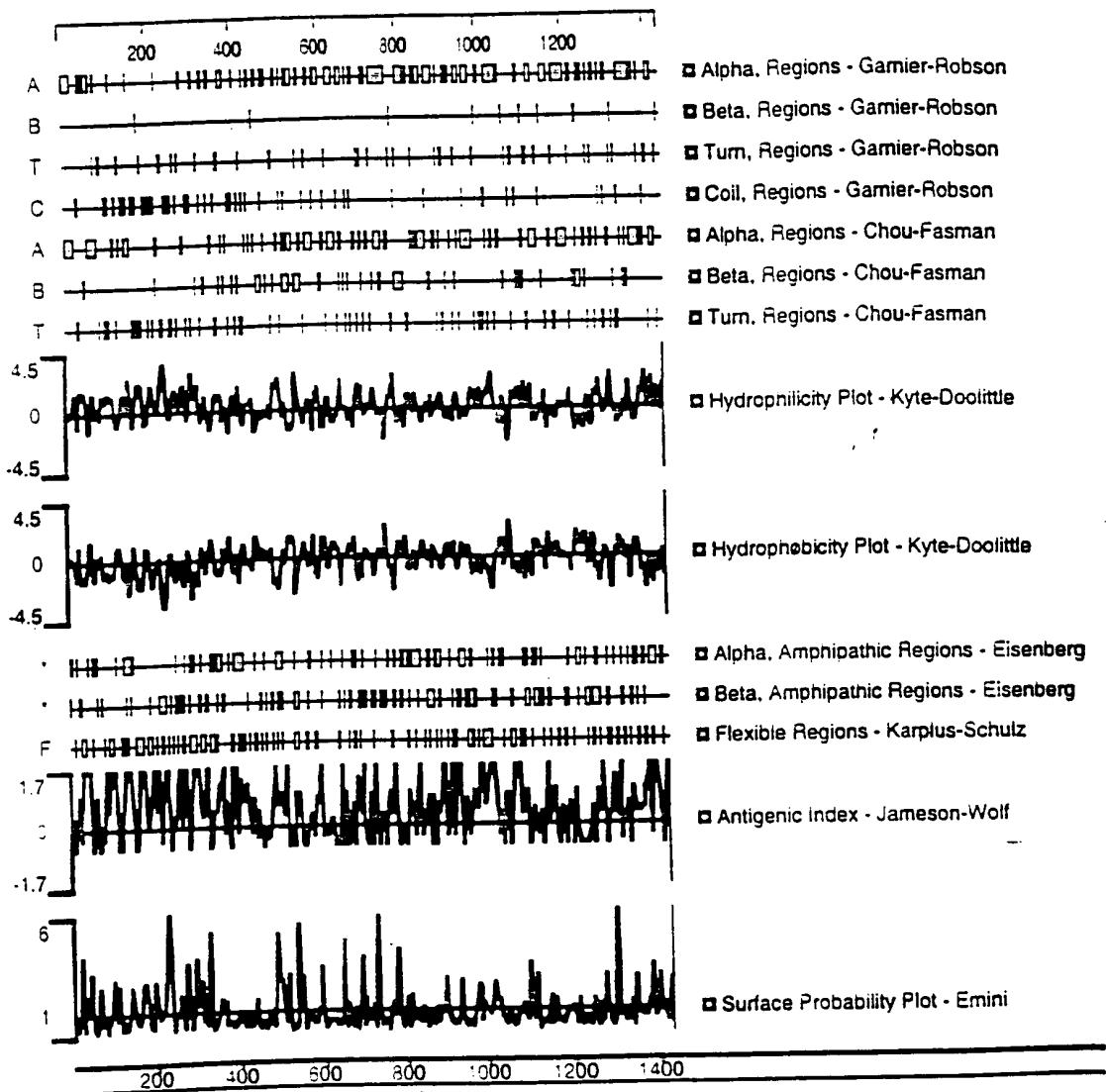


FIG. 3

CCTCGTTCTCAACTTCTTTAAAATATGTTCATAGAGAAGGACGGCTCTGAGATTCTAGGGAAACAGCTCTAGGA 79
 CTTCCGGTCCCCATGATGGCTGTGGCGGTAAACGGGGTTAGTGCAAGCATCTGGGCATCTTCATGGTAAAAAGAT 158
 ACAGTAAAGACATAAAATACCACATTGACAARATGGAAAAAGGAGTCCAGAAAAGAGTAGGCAGCACTGAGGAAGAG 237
 CTGCCGAGACGGGTATAACAGGGAGCTACCCCTGTGAGACCTTGTGACATCTCACATTTCCTCAGAAG 313
 M M R Q R Q S H Y C S V L F L S V N Y L 20
 ATG ATG AGA CAG AGG CAG AGC CAT TAT TGT TCC GTG CTG TTC CTC AGT GTC AAC TAT CTG 373
 G G T F P G D I C S E E N Q I V S S Y A 40
 GGG GGG ACA TTC CCA GGA GAC ATT TGC TCA GAA GAG AAT CAA ATA GTT TCC TCT TAT CCT 433
 S K V C F E I E E D Y K N R Q F L G P E 60
 TCT AAA GTC TGT TTT GAG ATC GAA GAT TAT AAA AAT CGT CAG TTT CTG GGG CCT GAA 493
 G N V D V E L I D K S T N R Y S V W F P 80
 GGA AAT GTG GAT GTT GAG TTG ATT GAT AAG AGC ACA AAC AGA TAC AGC GTT TGG TTC CCC 553
 T A G W Y L W S A T G L G F L V R D E V 100
 ACT GCT GGG TGG TAT CTG TGG TCA GCC ACA GGG CTC GGC TTC CTG GTC AGG GAT GAG GTC 613
 T V T I A F G S W S Q H L A L D L Q H R 120
 ACA GTG ACG ATT GCG TTT GGT TCC TGG AGT CAG CAC CTG GCC CTG GAC CTG CAG CAC CAT 673
 E Q W L V G G P L F D V T A E P E E A V 140
 GAA CAG TGG CTG GTG GGC CCC TTG TTT GAT GTC ACT GCA GAG CCA GAG GAG GCT GTC 733
 A E I H L P H F I S L Q G E V D V S W F 160
 GCC GAA ATC CAC CTC CCC CAC TTC ATC TCC CTC CAA GGT GAG GTG GAC GTC TCC TGG TTT 793
 L V A H F K N E G M V L E H P A R V E P 180
 CTC GTT GCC CAT TTT AAG AAT GAA GGG ATG GTC CTG GAG CAT CCA GCC CGG GTG GAG CCT 853
 F Y A V L E S P S F S L M G I L L R I A 200
 TTC TAT GCT GTC CTG GAA AGC CCC AGC TTC TCT CTG ATG GGC ATC CTG CTG CGG ATC GCC 913
 S G T R L S I P I T S N T L I Y Y H P H 220
 AGT GGG ACT CGC CTC TCC ATC CCC ATC ACT TCC AAC ACA TTG ATC TAT TAT CAC CCC CAC 973
 P E D I K F H L Y L V P S D A L L T K A 240
 CCC GAA GAT ATT AAG TTC CAC TTG TAC CTT GTC CCC AGC GAC GCC TTG CTA ACA AAG GCG 1033
 I D D E E D R F H G V R L Q T S P P M E 260
 ATA GAT GAT GAG GAA GAT CGC TTC CAT GGT GTG CGC CTG CAG ACT TCG CCC CCA ATG GAA 1093
 P L N F G S S Y I V S N S A N L K V M P 280
 CCC CTG AAC TTT GGT TCC AGT TAT GTG TCT AAT TCT GCT AAC CTG AAA GTA ATG CCC 1153
 K E L K L S Y R S P G E I Q H F S K F Y 300
 AAG GAG TTG AAA TTG TCC TAC AGG AGC CCT GGA GAA ATT CAG CAC TTC TCA AAA TTC TAT 1213
 A G Q M K E P I Q L E I T E K R H G T L 320
 GCT GGG CAG ATG AAG GAA CCC ATT CAA CTT GAG ATT ACT GAA AAA AGA CAT GGG ACT TTG 1273
 V W D T E V K P V D L Q L V A A S A P P 340
 GTG TGG GAT ACT GAG GTG AAG CCA GTG GAT CTC CAG CTT GTC GCT GCA TCA GCC CCT CCT 1333
 P F S G A A F V K E N H R Q L Q A R M G 360
 CCT TTC TCA GGT GCA GCC TTT GTG AAG GAG AAC CAC CGG CAA CTC CAA GCC AGG ATG GGG 1393
 D L K G V L D D L Q D N E V L T E N E K 380
 GAC CTG AAA GGG GTG CTC GAT GAT CTC CAG GAC AAT GAG GTT CCT ACT GAG AAT GAG AAG 1453
 S L V E Q E K T R Q S K N E A L L S M V 400

FIG. 4A

GAG CTG GTG GAG CAG GAA AAG ACA CGG CAG AGC AAG AAT GAG GCC TTG CTG AGC ATG GTG 1513
 E K K G D L A L D V L F R S I S E R D P 420
 GAG AAG AAA GGG GAC CTG GCC CTG GAC GTG CTC TTC AGA AGC ATT AGT GAA AGG GAC CCT 1573
 Y L V S Y L R Q Q N L * 432
 TAC CTC GTG TCC TAT CTT AGA CAG CAG AAT TTG TAA 1609
 AATGAGTCAGTTAGGTAGTCTGGAAAGAGAGAATCCAGCGTTCTCATGGAAATGGATAAACAGAAAATGTGATCATTGAT 1688
 TTCACTGTTCAAGACAGAAGAAGACTGGTAACATCTATCACACAGGCTTCAGGACAGACTTGTAACCTGGCATGTAC 1767
 CTATTGACTGTATCCTCATGCATTTCTCATGAAATGTCAGAAGAGGTAGTAATATTCCCTTTAAATTTTCTAACCC 1846
 ATTGCTTCATATATCACTATTTATCCATTGACATGATTCTGAAGACCCAGGATAAAGGACATCCGGATAGGTGTGTT 1925
 TATGAAGGATGGGGCTGGAAAGGCACTTTCTGATTAATGTGAAAAATAATTCTATGGACACTCCGTTGAAAGTA 2004
 TCACCTCTCATAACTAAAAGCAGAAAAGCTAACAAAAGCTTCTCAGCTGAGGACACTCAAGGCATACTGATGACAGT 2083
 CTTTTTTTTGTATGTTAGGACTTTAACCTTATCTATGGCTACTGTTATTAGAACAAATGTAATGTATTTCTG 2162
 AAAGAGACCAACAAAATGGGAGAAAATGCAAACATGAGCAGAAAATATTTCTGCTCTGTTGAGCTCAAGGA 2241
 GTTGTTCGGTAAATGTCATGGTCAACTCCAGGAATACTGAGATGAAATGTGCTAAATCAACTCCACAGAACCCACCA 2320
 AAAAGAAAATGAGGTAATTCACTTATTCTGAGACAGACATTCTGCAATGTACCAACAAAATAAGCCAACTCT 2399
 GACATTGGATTCTACCATAGACTCTGCACTTGTAGCCATTCTAGCTGTCTTTGATTAATGTTCTGGCACACA 2478
 TATTTCCATCTTTATGTTAATCTGTTAAAACAAGTCTCTAGTAGACACCCTCTGTTGAGTCAGTTTTTTATG 2557
 GTGTATTTGAAACCCATTCTGATAGTCCTTTAACCTGGAAAGATTCTAATTACTACCTTAATGTAATTATTAATATG 2636
 TAGGATTTATCCTCAGTCGCCAGTTGTTATGTCCTTCTATTCTACTGTTATCACATTGTACCACTAAAGTGGAA 2715
 TCTAGGCACCTTATCACCRTTAGATCTTACCTTCTCATCTAGGATATAGTTATCTCTACATAATCTTCTGT 2794
 ATCTTAAAACCCATCAATAAATTATATATTTCTACTTTAACCTCACTCAGAAGATTAAAAACTCATGAGAAGAG 2873
 TAATCTGTTATGTTTCCAGATATTACCATTTCTGTTGCTCTCCTCATTATTTCCAATTCTGTTCTGCAAATT 2952
 TCCACITCTCTGATAGACGTTTTAGTTCTTGTAGAGTGGTCTGATAGGTACAGATTCTCTTATTTTCTGCTTCCCT 3031
 CTGAGGACATCTTTCTCACCTCATTCTCAGTGATGTTTTGCTTGTAGTATTGTTGACATTGTTCTGTT 3110
 CAGCAGTTCTTTAGCTCCGTTCTGAGAAATCTGACTGATTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTT 3189
 TGTCACTTCTGTCAGATTCAGGTATTTATCTTGTGTTCTGAGGTTCTGTTCTGTTCTGTTCTGTTCTGTT 3268
 TTATTCCTCTGGAAATTGCTCCAATTCTAAATTCTGAGTTTATGTTCTTACCAAACCTAGAGGTTCTGAGCT 3347
 ATTTCTAAAAACTTTTATTAGCCTGATTTCTCTTATAGGAAATAGTTAAGTGTGACAAAGTCCAATAGCTT 3426
 ATATGCCAGAAGGCCCTCAAAATAAGAATTGGAAAGAATACAGAAAACAAACTTTATATCCTCTCATGTCCTCTA 3505
 CTGTAACATTCTATGCTTGTACTCTAACCTAGTTGAAATCAACAGTCTGAGAAATAGATGAAAATTTCTGAA 3584
 TAGTGGAAATTCTTTAAATGGAAACCTTACATGTGATTTCTGCTCTGAGACTCTTATGTTGAAATGTTAGACTTTATGTTG 3663
 AATCAATCAATATTATATTCTTTCTCTCTCTGAGACTCTTATGTTGAAATGTTAGACTTTATGTTG 3742
 CTAAATGTCCTGATATTCTACTTATTAGAACATCTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTT 3821
 CTATTTCAAAATTGCTGGAGTGTTCACCTGTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTTCTGTT 3900
 TGGTCACTGTATGATGTCAGTTCTAAAATTCCATTCTGTTCTATATTAAATTCTGGCTTATTTCTATTTCTC 3979

FIG. 4B

TGCAAATGTGTCAAGCATTTCCTTTGAGCTTTTCTAAGACAGGGTCTRACTCTGTTACCCAGGCTGGAGT 4058
GCAGTGGTGGCATCTCAGCTCACTGCAACCTCTGCCCTCTGCTTCAAGCGATTATTCAGGCTCTGAGTAGCT 4137
GGGATTACAGGCATGCACCCACAGCCCCAGCTAAATTTTGATTTTGTAGAGACAGAGTTTGCTATGTTGGCCA 4216
GGCTGGTTTGAACTCTGGCTCAAGTGATCCACCCACCTCAGCCTCCAAAGTGCTGGATTACAGGCCACTACACC 4295
TGGCACATTGAGTATTTTTTTTTTGAGATGGAGTCTGCTCTGTCATCTAGGCTGGAGTGCACTGG 4374
TGTGATCTCAGCTCACTGCAGCCTCTGCTCCCCGGCTCAAGGGATTCTCTGCTCTGAGTAGCTAGGACT 4453
ACAGGTGGCATGCCAACACGGCCGGCTAAATTTTAAAGAAAATATTTTGTAGAGACAGGGTTCAACATTGGCCAG 4532
GATGGTCTCGATCTCCTGACCTCATGATCCACCCGGCTGGCCTCCAAAGTGCTGGATTACAGGCATGAGCCACCGT 4611
GCCTGGCCTCATTGAGTATTTTAAATGTCCTTTAAAGTCTTGTAGATAATTCCACTGTACATGTTATTCACT 4690
CTTTGGTGTCCACTGAGTTGTCATTTGCCAGACAAGTGGAGATTTTGCAGCTCATCCTGTATTCTCAGTAGTTCCGA 4769
TATGTACCCCTGACATGTGAATGTTATCTTATGAGACTCTGTTTATTTGTATCCAACAGAAGATGTTATTATTATT 4848
TGGCTTTCTGTGAACGTGAGGTCTTAATATCAGCTCATTTAAAGTCCTGGCAGTGGTATTGGATCTATCCTGTGT 4927
GCCTATGAGATTGGGTGCAGTGTATCCTGTTAGCTCCATTCTCAGGGCGTTCAATGTGAATTAGGACCAGCGCAATGA 5006
ATGCTCAAGTGGGTTGGCCCTAGAATTCAAAAGTCCTTATATGCTCAG 5059

FIG. 4C

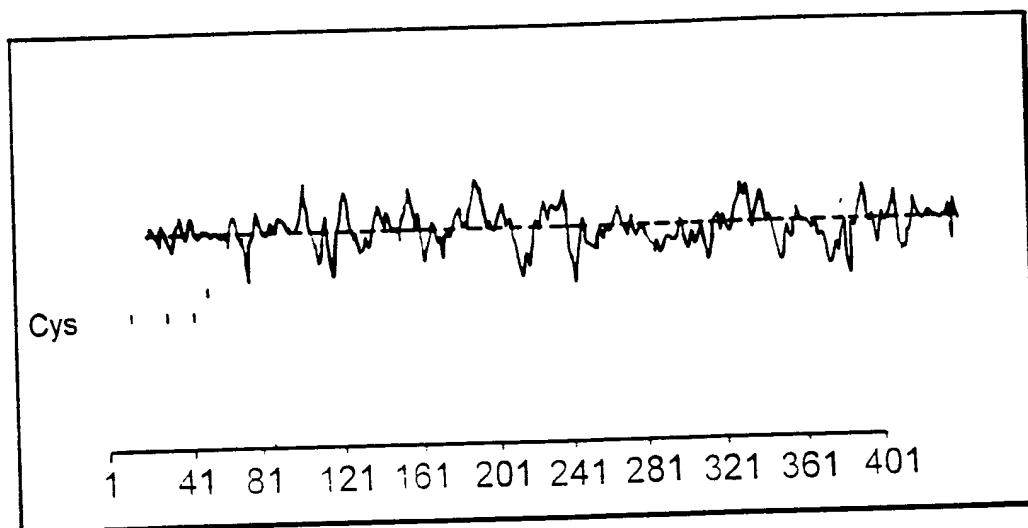


FIG. 5

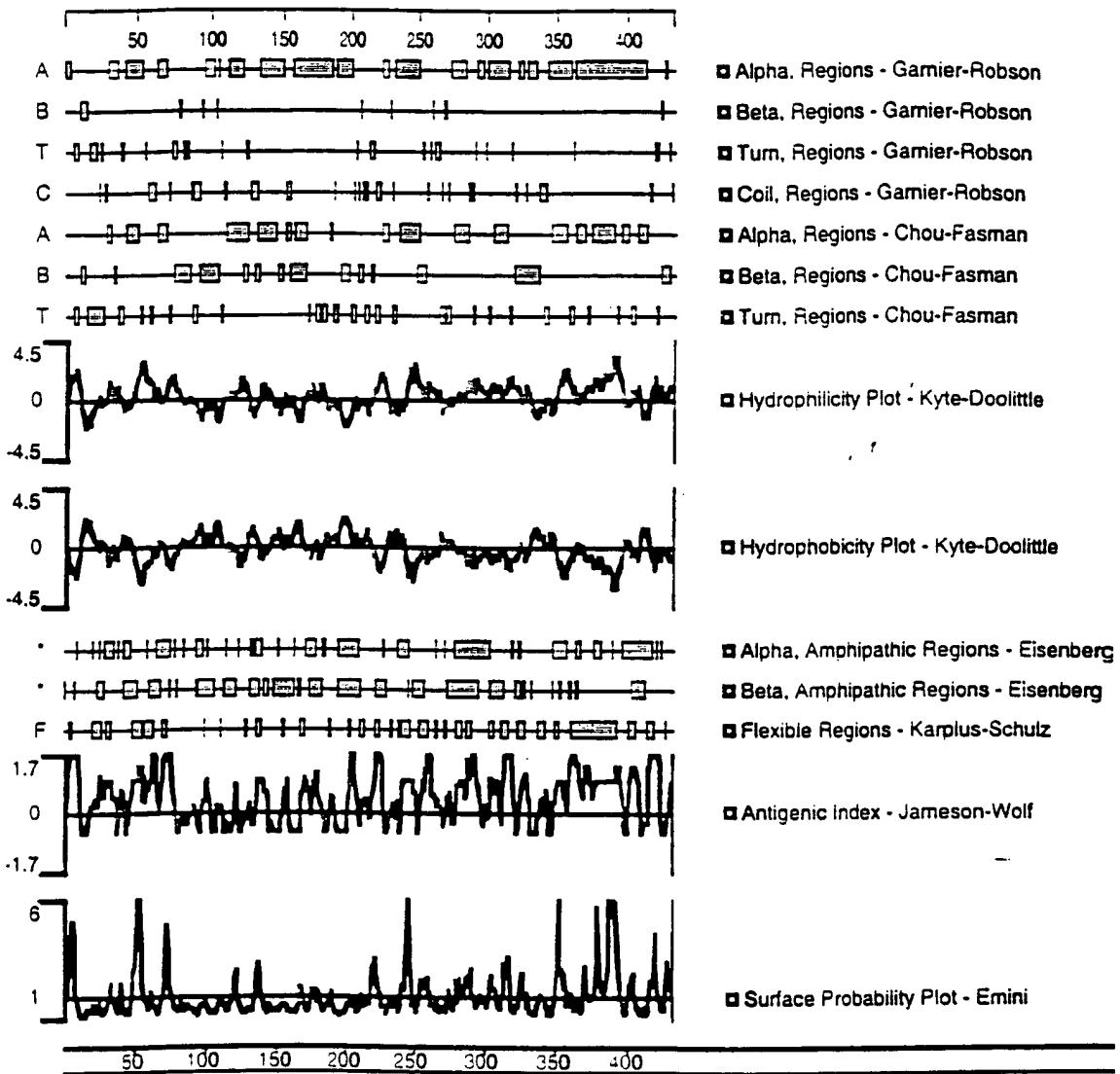


FIG. 6

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

CARD8 P P F S G A - A F V K E N H R Q L Q A R M G D - - - L K G V I D D L Q D N E V L T E N E K E L V E
CARD7 L D A P O L L H F V D Q Y R E Q L I A R V T - - - S - V E V V I D K L H G - Q V L S Q E Q Y E R V -
ASC S A A K P G I H F I D Q H R A A L I A R V T - - - N - V E V V I D K L H G - Q V L S Q E Q Y E R V -
APAF1 M D A K A R N C L L O - H R E A L E K D I K T S Y - - - I M D H M I S D G F L T I S E E E K V -
CARD4 E S - H P H I Q L L K S N R E L L V T H I R N T Q C L - - - V D N L L K N D Y F S A E D A E I V C
CASP1 M A - - - D - K V L K E K R K L F I R S M G E G T - I N G L L D E L L Q T R V L N K E E M E K V K
RICK I A - Q Q W I Q - - - S K R E D I V N Q M T E A - C L N Q S L D A L L S R D L I M K E D Y E L V S

CARD8 Q E K - T R Q S K N E A L L S M V E K K G O L A L O V L F R S I S E - R D P Y L - V S Y L - R
CARD7 L A E N T R P S Q M R K L F S L S Q S W D R K C K D G L Y Q A L K E - T H P H L - I M E L - - W
ASC R A E P T N P S K M R K L F S F T P A W N W T C K D L L Q A L R E - S Q S Y L - V E D L E R S
APAF1 R N E P T Q Q Q R A A M L I K M I L K K D N D S Y V S F Y N A L - - L H E G Y K D L A A L L H D
CARD4 - A C P T Q P D K V R K I L D L V O S K G E E V S E F F L Y L L Q O L A D A Y V D L R P W L E
CASP1 R E N A T V Y M D K T R A L I D S V I P K G A Q A C Q I C I T Y I C E - E D S Y L - A G T L - G L
RICK - T K P T R T S K V R Q L L D T T D I Q G E E F A K V I V Q K L K O N K Q - - M G I L Q P Y P E I

Fig. 7

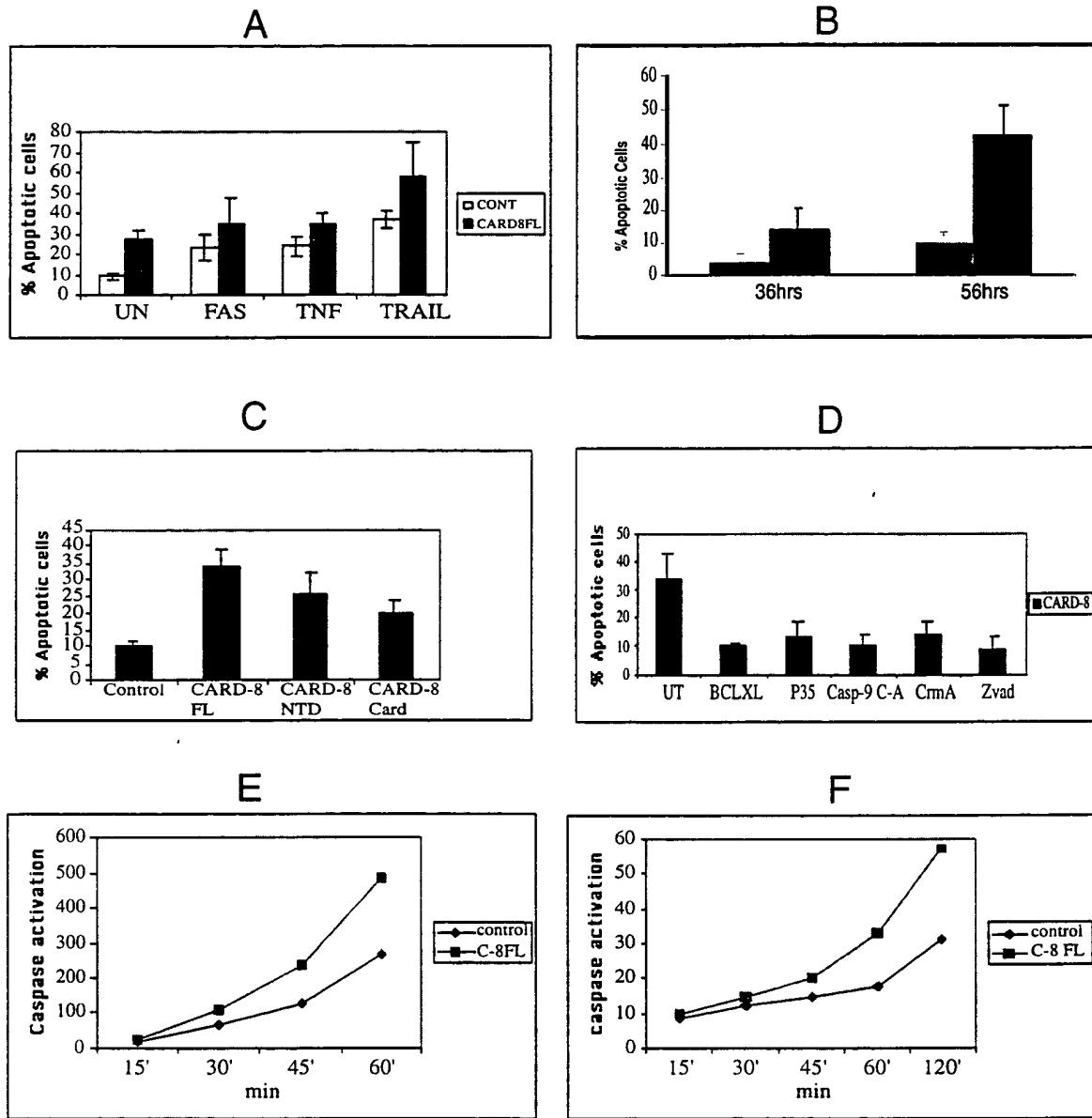
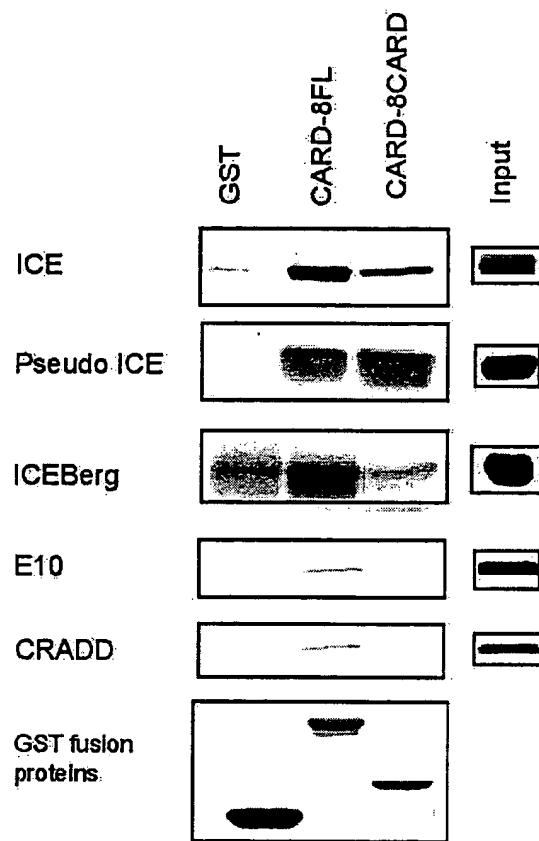
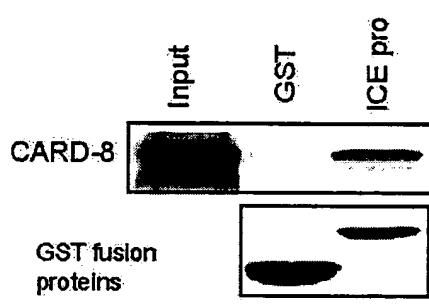


Fig. 8

A



B



C

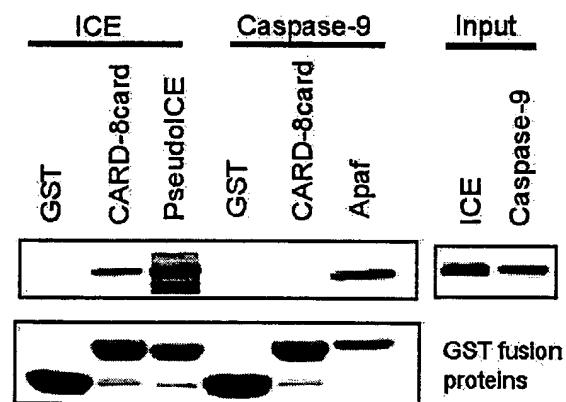
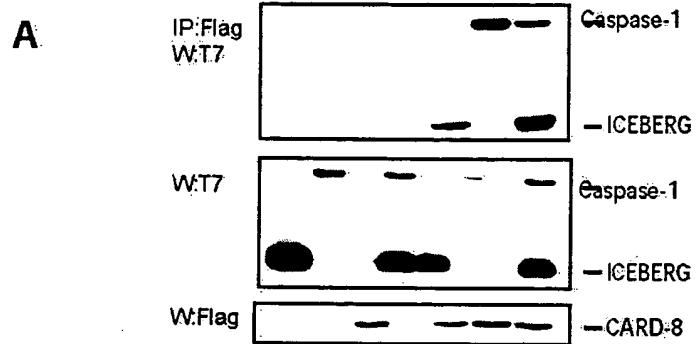


Fig. 9

T7 ICEBERG	+	-	-	+	+	-	-	+
T7Caspase-1 C-A	-	+	-	+	-	+	+	+
Flag CARD-8	-	-	+	-	+	+	+	+



T7Pseudo ICE	+	-	-	+	+	-	-	+
T7Caspase-1 C-A	-	+	-	+	-	+	+	+
Flag CARD-8	-	-	+	-	+	+	+	+

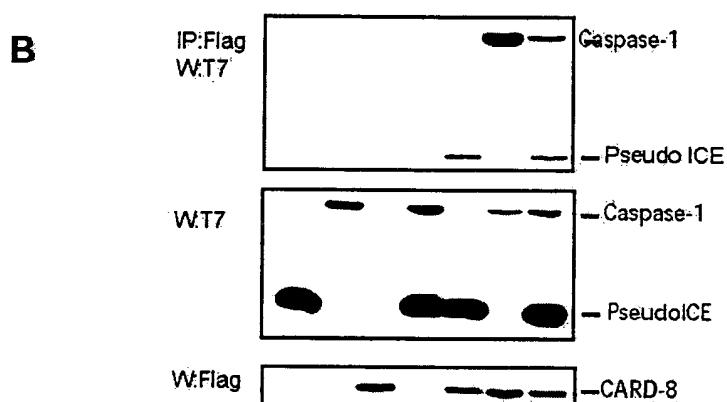


Fig. 10

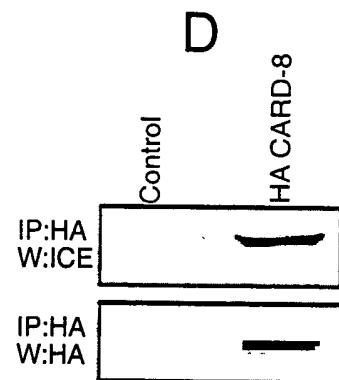
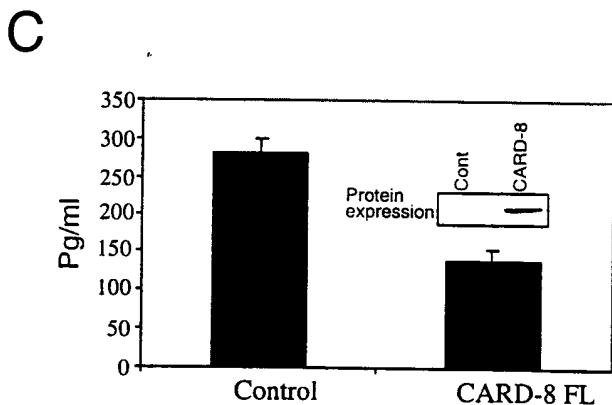
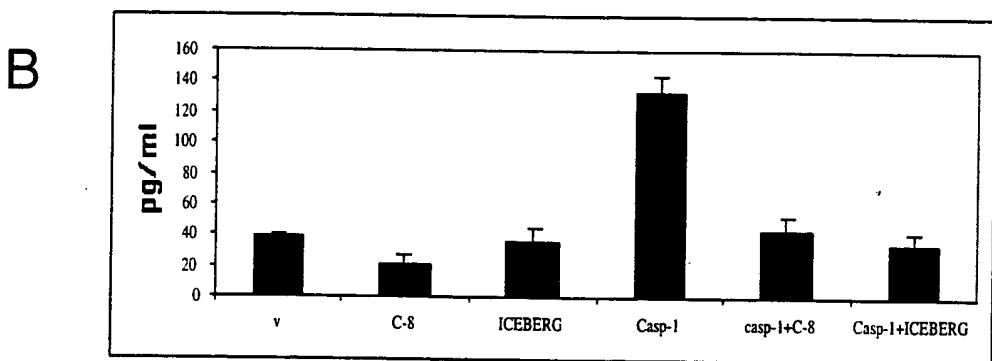
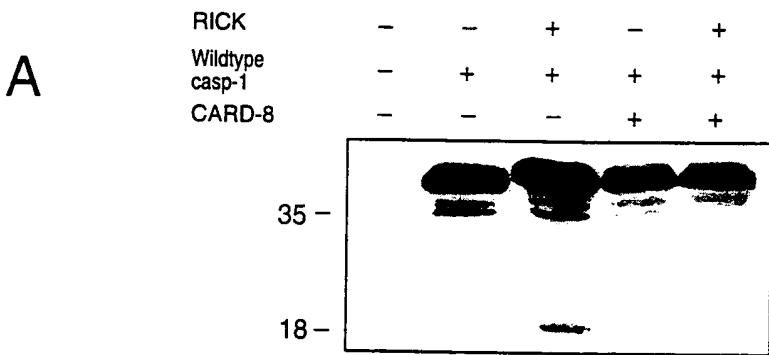


Fig. 11